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SEMICONDUCTOR THIN (54) MANUFACTURE OF

(57) Abstract:

PURPOSE: To form a semiconductor thin film with superior orientation on single crystalline substrate by photoconsisting of fluorosilane, silane or, a single crystalline or amorphous discomposing a mixture gas desirably, hydrogen.

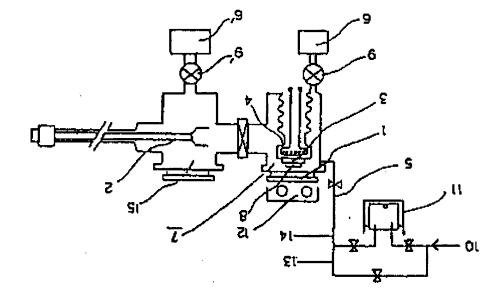
crystallineor amorphous single CONSTITUTION: A single

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placed in a thin film forming device 7 fluorosilane being more than twice he crystalline substrate whose surface is window 1, a substrate holding means 3, a substrate heating means 4, a gas discharge means 6, and the substrate which has at least a light permiating vaccum discharge. The material gas SimH2m+2 (integer of m=1W3) are group compounds, phosphine (PH3) usable. As the III group compounds introduction means 5 and a vaccum cleaned with washing or etching is nFn(integer of n=1W3) or Si2F6 is fluorosilane being 0.5W50 and the is supplied to the said device, with former. As the fluorosilane, SiH4usable. As the silane, monosilane, flowing ratio of hydrogen to the dibolane (B2H6) is usable. As V disilane, trisilane expressed with is heated to 100W400°C under to be added to the mixture gas, the flowing ratio of silane to or arsine (AsH3) is usable.

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